



Parking Standards for New Development Projects

TASK FORCE MEETING #3
June 11, 2014
Lee Center



AGENDA

- ❑ Follow up items
- ❑ Tools to Right-Size Parking
- ❑ Neighboring Jurisdictions
 - Washington DC - Speaker: Cheryl Cort, Policy Director, Coalition for Smarter Growth
 - Arlington
 - Montgomery County
- ❑ National Examples
- ❑ Other Policies
- ❑ Task Force & Public Discussion
- ❑ Next Steps



FOLLOW UP ITEMS

- Data Collection Spreadsheet
- Eliminate data that was not directly observed during parking occupancy counts



DEMAND BASED RATIO/ PROVIDED RATIO

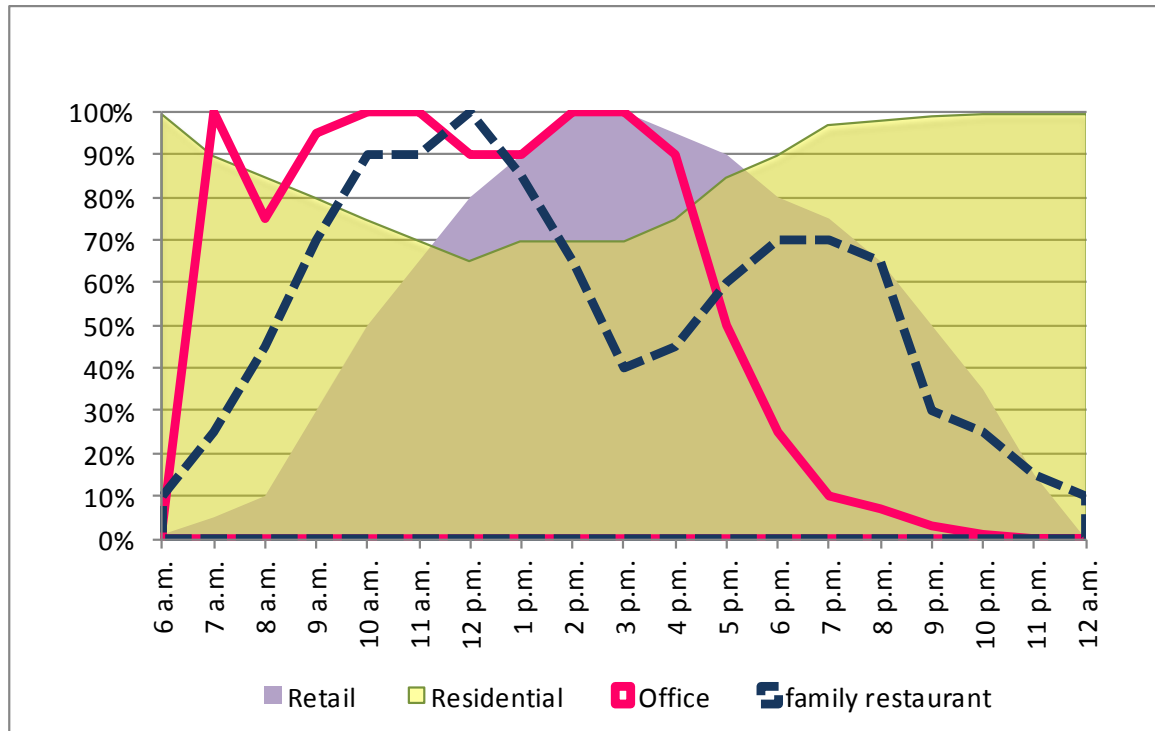
Property Name	Distance from Metro	# of Dwelling Units	Provided Parking Ratio	Average Demand Based Parking Ratio	Average Per Bedroom Demand Ratio	Demand Based Ratio/Provided Ratio	Construction Year	# of Bus Routes Serving the Area	Walk Score ⁽⁴⁾	Bike Score
Site A1	0.1	369	1.2	0.9	0.6	75%	2007	3	83	58
Site A2	0.2	206	1.2	1.0	0.7	80%	2013	6	86	65
Site A3	0.2	480	1.1	0.9	0.7	77%	1992	4	80	64
Site A4 ⁽⁵⁾	0.2	315	1.7	1.2	0.8	73%	2000	1	82	56
Site A5 ⁽¹⁾	0.2	169	1.6	1.0	0.7	65%	2008	6	86	65
Average			1.4	1.0	0.7	73%				
Site B1	0.4	403	1.2	0.8	0.6	68%	2001	3	92	61
Site B2 ⁽¹⁾	0.5	64	1.8	1.3	0.6	70%	2007	2	95	63
Site B3 ⁽²⁾	0.5	58	2.0	1.8	1.2	89%	2009	4	94	62
Site B4 ⁽¹⁾	0.7	169	1.4	1.4	0.7	96%	1974	3	71	47
Site B5 ⁽¹⁾⁽²⁾	0.6	57	1.6	1.1	0.6	67%	2011	4	80	64
Average			1.6	1.3	0.8	78%				
Site C1	1.5	141	1.7	1.5	1.1	91%	2009	4	69	55
Site C2	1.5	104	1.3	1.1	0.6	83%	2006	4	83	26
Site C3	2	588	1.5	1.3	0.9	84%	2002	3	75	81
Site C4	2.1	350	1.2	1.1	0.9	97%	1968	4	62	42
Site C5	2.6	416	1.3	1.3	0.9	98%	1946	2	65	83
Site C6	3.1	547	1.2	1.4	0.9	120%	1962	7	69	47
Average			1.4	1.3	0.9	95%				

TOOLS TO RIGHT-SIZE PARKING

- ☐ Parking Minimums
- ☐ Parking Maximums
- ☐ Reducing/"Tailoring" Minimum Requirements
- ☐ Unbundling
- ☐ Transportation Management Plans
 - Shared Parking
 - Carshare Space
 - Bike Parking
- ☐ Residential Parking Permit Pricing

SHARED PARKING

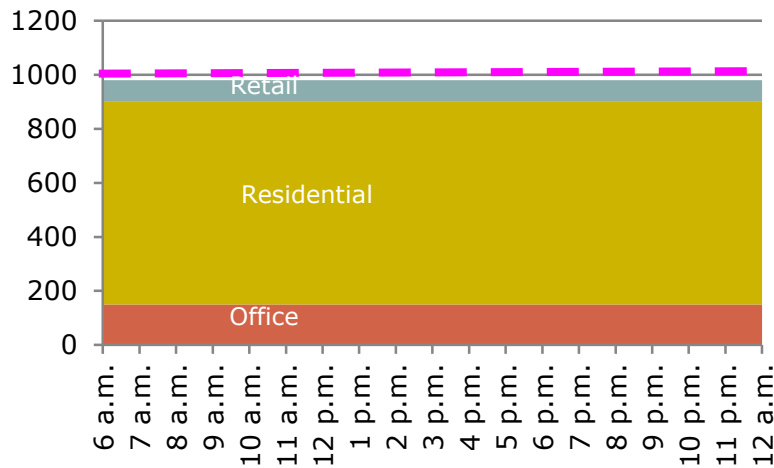
- ❑ Share parking spaces among land uses over the course of the day



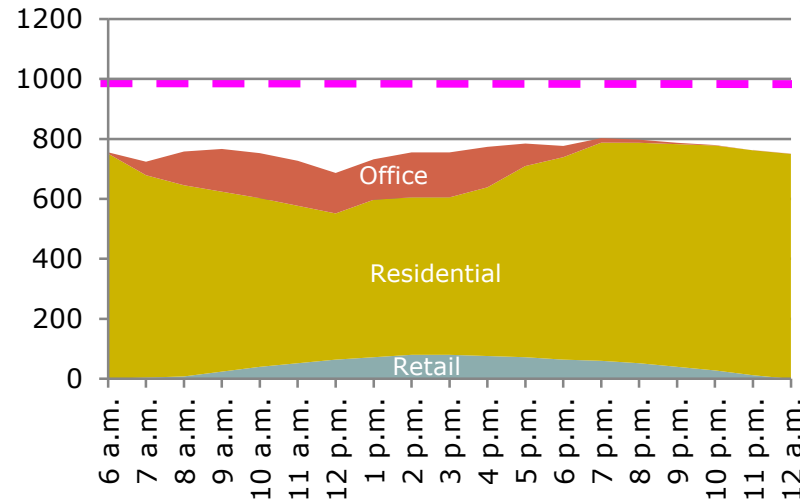


Office (50,000 Sq. Ft.) @ 3 per 1000 sq. ft. = **150 parking spaces**
 Residential (500 DU) @ 1.5 per unit= **750 parking spaces**
 Retail (40,000 Sq. Ft.) @ 2 per 1000 sq. ft. = **80 parking spaces**
Required 24/7 980 parking spaces

Non-Shared



Shared



	6 a.m.	7 a.m.	8 a.m.	9 a.m.	10 a.m.	11 a.m.	12 p.m.	1 p.m.	2 p.m.	3 p.m.	4 p.m.	5 p.m.	6 p.m.	7 p.m.	8 p.m.	9 p.m.	10 p.m.	11 p.m.	12 a.m.
Office	3%	30%	75%	95%	100%	100%	90%	90%	100%	100%	90%	50%	25%	10%	7%	3%	1%	0%	0%
Residential	100%	90%	85%	80%	75%	70%	65%	70%	70%	70%	75%	85%	90%	97%	98%	99%	100%	100%	100%
Retail	1%	5%	10%	30%	50%	65%	80%	90%	100%	100%	95%	90%	80%	75%	65%	50%	35%	15%	0%
	6 a.m.	7 a.m.	8 a.m.	9 a.m.	10 a.m.	11 a.m.	12 p.m.	1 p.m.	2 p.m.	3 p.m.	4 p.m.	5 p.m.	6 p.m.	7 p.m.	8 p.m.	9 p.m.	10 p.m.	11 p.m.	12 a.m.
Office	5	45	113	143	150	150	135	135	150	150	135	75	38	15	11	5	2	0	0
Residential	750	675	638	600	563	525	488	525	525	525	563	638	675	728	735	743	750	750	750
Retail	1	4	8	24	40	52	64	72	80	80	76	72	64	60	52	40	28	12	0
Total	755	724	758	767	753	727	687	732	755	755	774	785	777	803	798	787	780	762	750

NEIGHBORING JURISDICTIONS



❑ District of Columbia

Residential Ratios: Minimums (Under Revision)

Shared Parking: Codification in Process

Carshare Space: Codification in Process

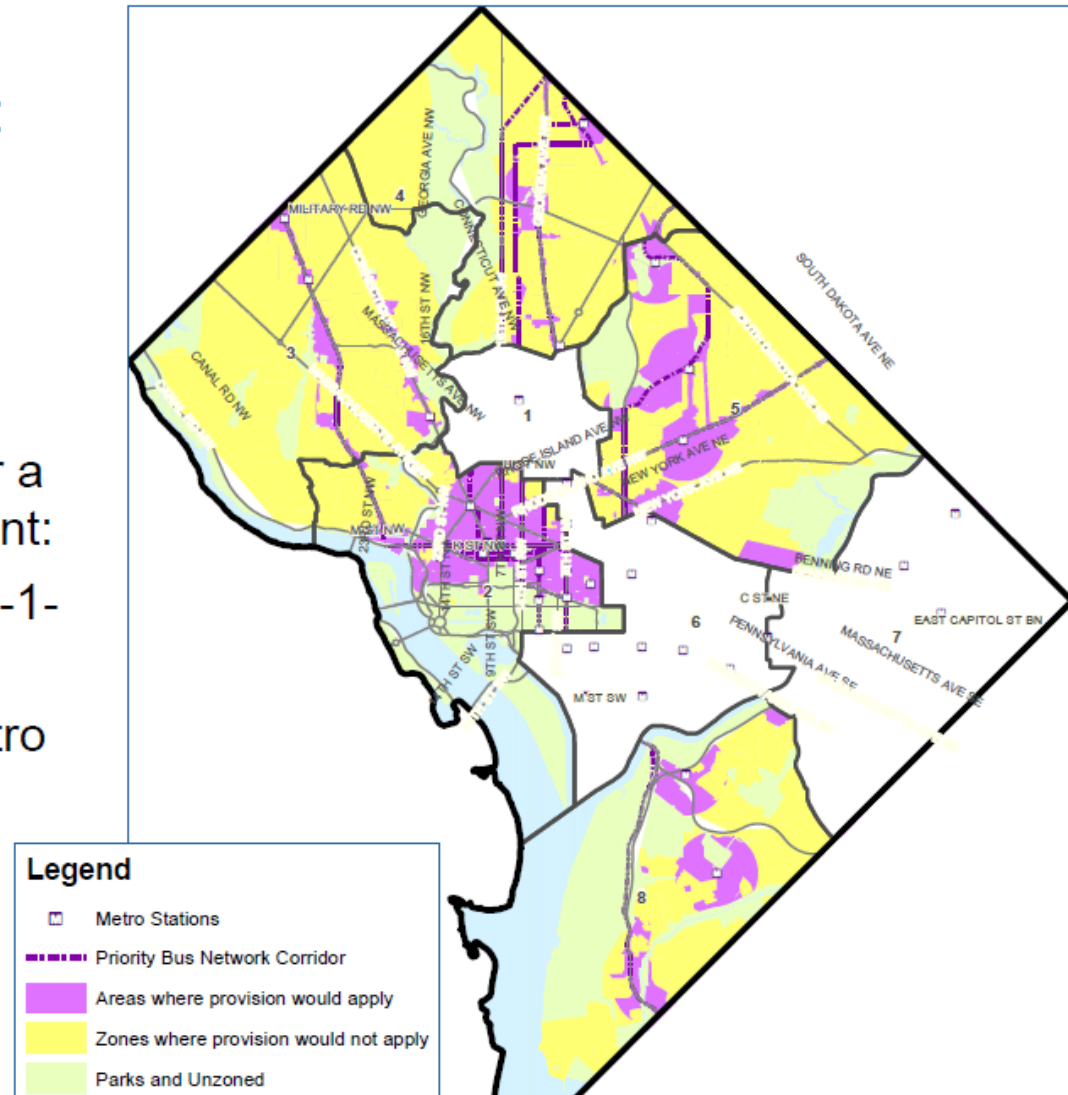
Unbundling: Not Proposed

	Min (existing)	Revised Zoning Ordinance Codification in Process
Multi-family	Varies between <u>1.0/unit</u> to <u>0.25/ unit</u> in different zones	<ul style="list-style-type: none">- <u>50% reduction</u> in required parking for any use on a site located close to transit- <u>No minimums in downtown</u>- <u>1/3 units</u> for dev. More than 4 units
Affordable Housing	Not different than market rate	1/6 units publicly assisted housing, reserved for the elderly and/or handicapped

Where 50% Parking Reduction Would Apply

Combined map showing:

- zoning
- location of metro stations
- location of Priority Bus Corridors
- areas that are proposed for a reduced parking requirement:
 - NOT zoned (current) R-1-R-4, and
 - within 1/2 mile of a metro station or
 - within 1/4 mile of a Priority Bus Corridor



NEIGHBORING JURISDICTIONS

❑ Montgomery County

Residential Ratios: Range

Shared Parking: Codified

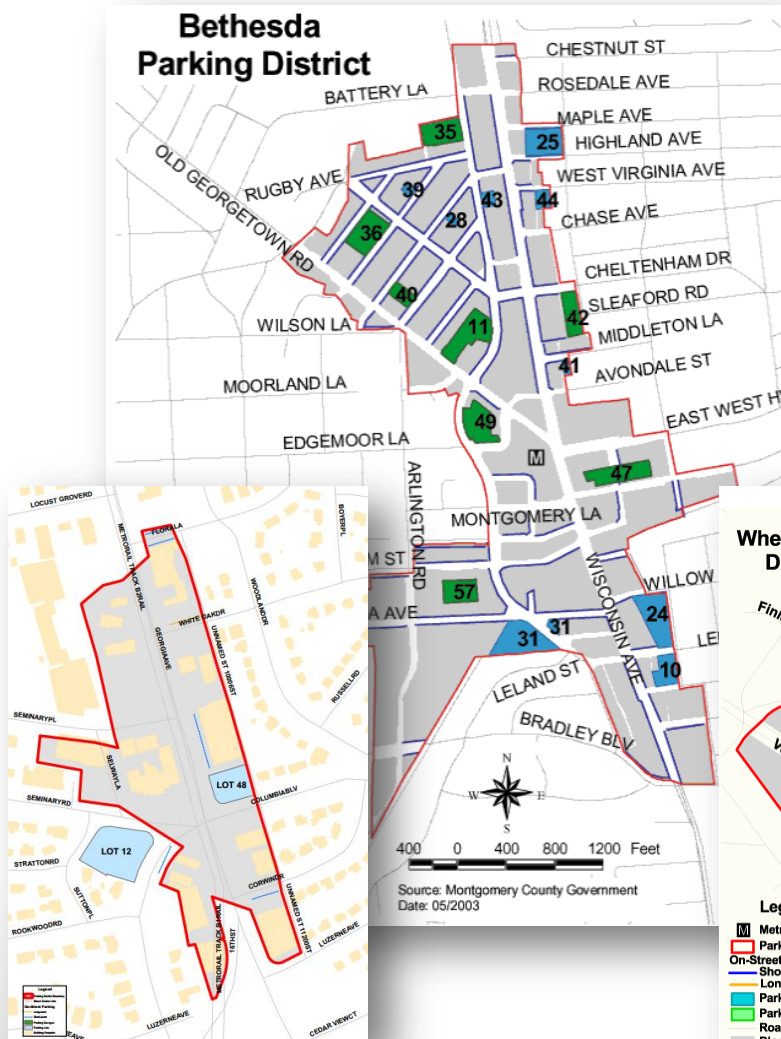
Carshare Space: Codified

Unbundling: Codified

	Parking Districts		Other locations
Multi-family	Min.	Max.	Min.
<i>Efficiency</i>	.5 / Unit	1.0 / Unit	1.0 / Unit
<i>1 bd</i>	.5 / Unit	1.25 / Unit	1.25 / Unit
<i>2 bd</i>	.75 / Unit	1.5 / Unit	1.5 / Unit
<i>3 bd</i>	1.0 / Unit	2.0 / Unit	2.0 / Unit
Affordable Housing	50% from the baseline rate for the specific unit type.		

NEIGHBORING JURISDICTIONS

Montgomery County Parking Districts



NEIGHBORING JURISDICTIONS

❑ Arlington County

Residential Ratios : Minimums

Shared Parking: Not Codified*

Carshare Space: Not Codified*

Unbundling: Not Codified*

	Countywide	Special Districts (Columbia Pike)
Multi-family	<u>1.125/unit</u> for the first 200 units plus <u>1.0/unit</u> for each additional unit	1.0/unit
Affordable Housing	0.825/unit	

* County Board has approved a number of special exception projects that incorporated parking management strategies (carshare, shared parking, etc.) and allowed them to count carshare, and tandem spaces toward their approved ratio.

ALEXANDRIA



Residential Ratios: Minimums except Eisenhower & Beauregard CDD

Shared Parking: Not Codified

Carshare Space: Not Codified

Unbundling: Not Codified

	Codified: Min (existing)	Codified: Max (existing)	Not Codified but Recommended in Small Area plans
Multi-family	<u>Citywide except Beauregard & Eisenhower</u> Studio: 1.3/unit 1bd: 1.3/unit 2 bd:1.75 /bd 3 bd: 2.2/bd	<u>Beauregard</u> Pre-transit: 1.75/ unit Post-transit:1.3/unit <u>Eisenhower</u> Within 1500' of metro: 1.1/1000sf More than 1500': Max 1.3/1000sf	<u>Braddock</u> 1.0/unit (up to 2 bdrm) 1.5/unit 3 bdrm up + 15% visitor parking <u>Landmark</u> Pre-Transit : 1.75/unit Post-Transit : 1.15/unit (includes 15% visitor)
Affordable Housing	Not codified		.75 (Recommended in Housing Master Plan)



PARKING STANDARDS FOR NEW DEVELOPMENT PROJECTS-Meeting #3

[14]

NATIONAL BEST PRACTICES

City	Minimum	Maximum	Unbundling	Shared Parking	Residential Parking Permit Program	Carshare Applied To Parking Ratio	Bikeshare Applied to Parking Ratio	Lower Ratios for Proximity to Transit	Reductions for Carpool/Vanpool	Reductions for Affordable Housing
Local Jurisdictions										
Alexandria, VA (9,314 people/mi ²)	•	•			•			•		
Washington, DC (9,856 people/mi ²)	•				•			•		•
Arlington County, VA (8,309 people/mi ²)	•			•	•			•		•
Montgomery County, MD (1,762 people/mi ²)	•	•	•	•	•	•		•		•
National Jurisdictions: Less than 10,000 people/mi²										
San Diego, CA (4,020 people/mi ²)	•			•	•			•		•
Portland, OR (4,375 people/mi ²)	•				•	•	•	•		
San Jose ¹ , CA (5,359 people/mi ²)	•		•	•	•	•	•	•		
Milwaukee, WI (6,188 people/mi ²)	•			•	•			•	•	•
Oakland, CA (7,004 people/mi ²)	•			•	•		•	•		
Seattle, WA (7,251 people/mi ²)	•			•	•	•		•		•
Los Angeles, CA (8,092 people/mi ²)	•			•	•			•		•
National Jurisdictions: More than 10,000 people/mi²										
Philadelphia, PA (11,379 people/mi ²)	•			•	•	•	•	•	•	
Chicago, IL (11,842 people/mi ²)	•	•			•			•		
Boston, MA (12,793 people/mi ²)	•	•						•		•
San Francisco, CA (17,179 people/mi ²)	•	•	•	•	•	•		•		
National Jurisdictions: More than 20,000 people/mi²										
New York, NY (27,179 people/mi ²)	•	•		•				•		•

Note: Jurisdictions may use additional best practices and tools; the information above only reflects tools and best practices that are codified in their Zoning Ordinance

• Parking Best Practice or tool is codified in City's Zoning Ordinance



KING COUNTY PARKING CALCULATOR

- A statistical model to estimate parking use based on building and environmental characteristics
 - The dependent variable: demand based parking ratios gathered from the field data
 - Independent variables:
 - Average Rent
 - Units per Residential square feet
 - Percent of Units Designated Affordable
 - Average Occupied Bedroom Count
 - Parking Price as a Fraction of Rent
 - Gravity measure of Transit Service
 - Gravity measure of Intensity

KING COUNTY PARKING CALCULATOR

Right Size Parking

King County Multi-Family Residential Parking Calculator

TOOLS TO BALANCE SUPPLY

1 Parcel Selected

Parking/Unit Ratio 0.69

Building & Parking Specifications

Location Characteristics

Parking Impacts

Impact	Estimated Utilization (From Model)	Compared To (User Input)
Estimated Parking Use Ratio:	0.69	
Total Stalls:	104	-
Surface Parking		
Total Capital Costs (Land & Construction)	\$7,442,888	-
Residential Unit	\$395	-
ons from maintenance (kg)	7,371	-
Land &	\$3,807,193	-
Residential Unit	\$225	-
ons from maintenance (kg)	17,959	-
of Building	999,821	-
Vehicle Use of	406,409	-

UPDATE

Population: 130,545

Population concentration similar to: First Hill

Jobs: 234,320

Job concentration similar to: Seattle CBD

Transit Service: 1,494

Transit service concentration similar to: Seattle CBD

Map of King County with a heatmap overlay showing parking density. A black arrow points to the Seattle area.

Map of a specific area in Seattle with a heatmap overlay. A black arrow points to a specific location. A tooltip shows: PIN: 1976700095, Address not available, Remove parcel.

KING COUNTY PARKING CALCULATOR

Enter a location...

1 Parcel Selected

Parking/Unit Ratio 1.02

Building & Parking Specifications

Location Characteristics

Parking Impacts

Impact	Estimated Utilization (From Model)	Compared To (User Input)
Estimated Parking Use Ratio:	1.02	<input type="text"/>
Total Stalls:	153	
Surface Parking		
Total Capital Costs (Land & Construction):	\$4,075,193	
Monthly Costs per Residential Unit (including O&M):	\$239	
Annual GHG Emissions from Construction and Maintenance (kg CO2e):	10,851	
Structure Parking		
Total Capital Costs (Land & Construction):	\$3,854,660	
Monthly Costs per Residential Unit (including O&M):	\$237	
Annual GHG Emissions from Construction and Maintenance (kg CO2e):	26,439	
Estimated Annual VMT of Building Residents:	1,522,783	
GHG Emissions from Vehicle Use of Residents (kg CO2):	618,983	

UPDATE

76,770
Population concentration similar to Lake City

41,257
Job concentration similar to Kent East Hill

1,308
Transit service concentration similar to University District or Lower Queen Anne

Map of King County with a heatmap overlay showing population density. A black arrow points to the University District area. A red arrow points from the 'Estimated Parking Use Ratio' in the calculator to the '76,770' population concentration box.

Map of the NW 54th St area in Seattle, showing a yellow highlighted parcel. A pin is placed on the map with the text 'PIN: 1171 undefined' and a 'Remove' button.

KING COUNTY PARKING CALCULATOR

1 Parcel Selected

Parking/Unit Ratio 1.25

Building & Parking Specifications

Location Characteristics

Parking Impacts

Impact

Estimated Utilization (From Model)

Compared To (User Input)

Estimated Parking Use Ratio:

1.25

Total Stalls:

188

Surface Parking

Total Capital Costs (Land & Construction):

\$1,545,756

Monthly Costs per Residential Unit

\$106

48,019

Population concentration similar to: Eastgate, Factoria or Fauntleroy

26,967

Job concentration similar to: Kent East Hill

1,215

Transit service concentration similar to: Crossroads or Burien City Center

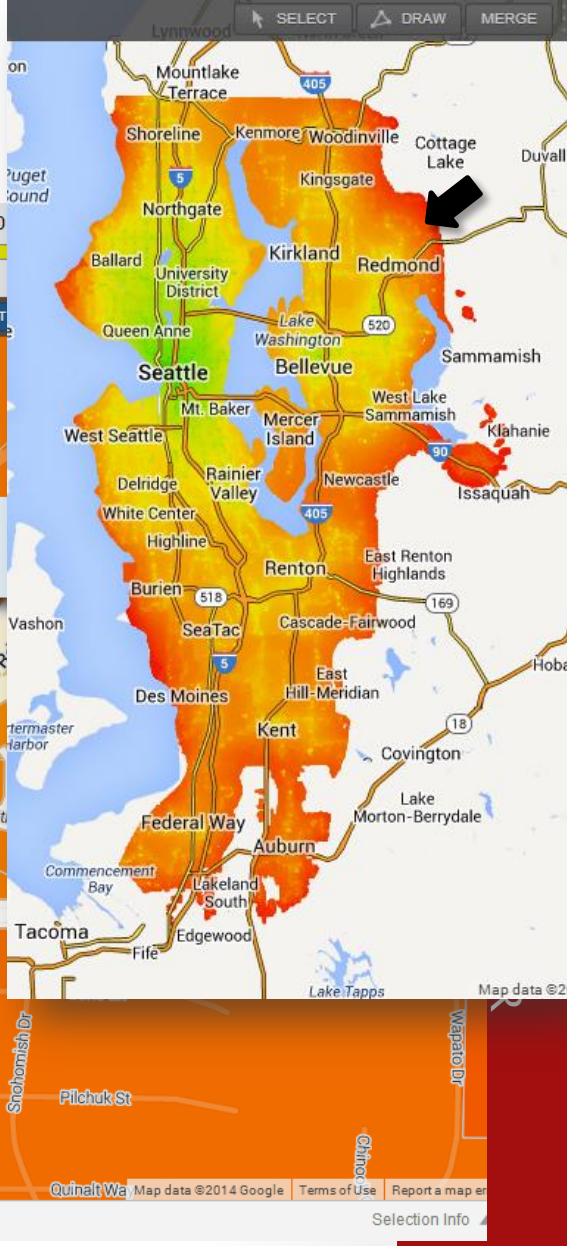
UPDATE

Parking/Unit Ratio

< .5 Stalls

Map

Map data ©2014 Google





KING COUNTY PARKING CALCULATOR

- Will not be codified
- Solely for research purposes
- Justification tool to revise parking ratios in Zoning Ordinance



PERFORMANCE BASED CHECKLIST

Location/characteristic of the proposed Development	Percent Reduction Granted
Located within .5 mile of Metro	20%
Located within .25 mile of a bus stop	15%
Contains a mix of uses where at least 45% of the gross floor area is residential	20%
Located within .25 mile of one or more existing public garage with spaces greater than 75 spaces	15%
Provides end of trip facilities for bicycle users	10%
Secure on site or adjacent street bike parking is provided	5%
Located within a district center	10%

Source: Town of Vincent, Australia



Property Name	Distance from Metro	# of Dwelling Units	Provided Parking Ratio	Average Demand Based Parking Ratio	Average Per Bedroom Demand Ratio	Construction Year	On-site TMP	# of Bus Routes Serving the Area	Walk Score ⁽⁴⁾	Bike Score
Site A2	0.2	206	1.2	1.0	0.7	2013	Yes	6	86	65

- 206 units
- Required number of spaces per City Code: 301
- Required ratio: 1.5
- Observed demand based parking ratio: 1.0**
- 50% reduction based on performance measures
- Ratio based on performance based check list: .73**

	Location/characteristic of the proposed Development	Reduction Granted (%)
✓	Located within .5 mile of Metro	20%
✓	Located within .25 mile of a bus stop	15%
✓ *	Contains a mix of uses where at least 45% of the gross floor area is residential	20%
X	Located within .25 mile of one or more existing public garage with spaces greater than 75 spaces	15%
X	Provides end of trip facilities for bicycle users	10%
✓	Secure on site or adjacent street bike parking is provided	5%
X	Located within a district center	10%

* The ground floor is only partially commercial (reduction of 10%)

PERFORMANCE BASED CHECKLIST (EXAMPLE)

Property Name	Distance from Metro	# of Dwelling Units	Ratio	Provided Parking Based Parking	Average Demand	Bedroom Demand	Average Per	Construction Year	On-site TMP	# of Bus Routes Serving the Area	Walk Score ⁽⁴⁾	Bike Score
Site B1	0.4	403	1.2	0.8	0.6	2001	Yes	3	92	61		

- 403 units
- Required number of spaces per City Code: 580
- Required ratio: 1.4
- **Observed demand based parking ratio: .8**
- 50 % reduction based on performance measures
- **Ratio based on performance based check list: .72**

	Location/characteristic of the proposed Development	Reduction Granted (%)
✓	Located within .5 mile of Metro	20%
X	Located within .25 mile of a bus stop	15%
X	Contains a mix of uses where at least 45% of the gross floor area is residential	20%
✓	Located within .25 mile of one or more existing public garage with spaces greater than 75 spaces	15%
X	Provides end of trip facilities for bicycle users	10%
✓	Secure on site or adjacent street bike parking is provided	5%
✓	Located within a district center	10%



Property Name	Distance from Metro	# of Dwelling Units	Provided Parking Ratio	Average Demand Based Parking Ratio	Average Per Bedroom Demand	Construction Year	On-site TMP	# of Bus Routes Serving the Area	Walk Score ⁽⁴⁾	Bike Score
Site C5	2.6	416	1.3	1.3	0.9	1946	No	2	65	83

- 416 units
- Required number of spaces per City Code: 625
- Required ratio: 1.5
- **Observed demand based parking ratio: 1.3**
- 12% reduction based on performance measures
- **Ratio based on performance based check list: 1.32**

	Location/characteristic of the proposed Development	Reduction Granted (%)
X	Located within .5 mile of Metro	20%
✓ *	Located within .25 mile of a bus stop	15%
X	Contains a mix of uses where at least 45% of the gross floor area is residential	20%
X	Located within .25 mile of one or more existing public garage with spaces greater than 75 spaces	15%
X	Provides end of trip facilities for bicycle users	10%
✓	Secure on site or adjacent street bike parking is provided	5%
X	Located within a district center	10%

* AT3 bus (Northbound) only stops at the bus stop during the rush hour (7% reduction)

PERFORMANCE BASED CHECKLIST (EXAMPLE)

DISCUSSION

- What are some lessons that we can learn from other jurisdictions?
- Are there any challenges with any of the best practices?
- Are there any best practices that were not discussed that should be considered?
- Are there any strategies that could be appropriate and effective in Alexandria?



NEXT STEPS

June 11	Parking Study Task Force Public Meeting #3	Best practices in local and national jurisdictions
July 16	TENTATIVE WORKING MEETING	
September 3 10	Parking Study Task Force Public Meeting #4	Discuss options and alternatives and initial recommendations
September 17	Transportation Commission Work Session	Discuss initial recommendations
October 7	Planning Commission Work Session	Discuss initial recommendations
October 21	City Council Work Session	Discuss initial recommendations
November 5	Parking Study Task Force Public Meeting #5	Discuss final recommendations
January 2015	Public Hearings (TC, PC & CC)	Consideration of recommendations and text amendment



Alexandria's Policies/Practices

	Codified Policy	Practice
1- Parking Minimums	Citywide (Developers often apply for parking reduction)	-
2- Parking Maximums	Beauregard Small Area Plan	Braddock & Eisenhower Small Area Plans
3- Transportation Management Plan (TMP)	Codified	
- Shared Parking	-	Encouraged
- Carshare Space	-	-
- Bike Parking	Codified *	
4- Unbundling	-	Encouraged

* Can not be counted again parking requirements